

## REMARKS

After entry of this Amendment, the pending claims are: claims 1, 2, 4-22 and 24-35. The Office Action dated April 10, 2007 has been carefully considered. Claims 3 and 23 have been canceled without prejudice. Claims 1, 2, 4-22 and 24-33 have been amended. Claims 34 and 35 have been added. No new matter has been added. Reconsideration and allowance of the pending claims in view of the above Amendments and the following Remarks is respectfully requested.

In the Office Action dated April 10, 2007, the Examiner:

- objected to claims 7-34 under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim;
- rejected claims 1, 3 and 5 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,867,728 to Stubstad *et al.* (“Stubstad”); and
- rejected claims 1, 2 and 6 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,066,960 to Dickman (“Dickman”) in view of Stubstad.

### DEPENDENT CLAIMS 7-34

Dependent claims 7-34 were objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. Claims 7-34 have been amended, without prejudice, to place them in accordance with standard U.S. patent practice. Withdrawal of this objection is respectfully requested.

### INDEPENDENT CLAIM 1

Independent claim 1 has been rejected as being anticipated by Stubstad. In addition, independent claim 1 has been rejected as being unpatentable over Dickman in view of Stubstad. As amended,

independent claim 1 requires, *inter alia*, an intervertebral implant comprising a bottom cover plate and a top cover plate, each with an external surface; a central part provided between the cover plates; a fibre system, the fibre system being at least partially joined to the cover plates and guided over the external surfaces of both cover plates so that the fibre system at least partially surrounds the central part as well as both cover plates; and a sheathing comprising an elastic sheathing body, the sheathing body at least partially surrounding the central part and wherein the fibre system is at least partially embedded within the elastic sheathing body.

It is respectfully submitted that Stubstad does not disclose, teach or suggest a fibre system at least partially joined to the cover plates and guided over the external surfaces of both cover plates so that the fibre system at least partially surrounds the central part as well as both cover plates and a sheathing comprising an elastic sheathing body, the sheathing body at least partially surrounding the central part and wherein the fibre system is at least partially embedded within the elastic sheathing body.

Stubstad discloses an intervertebral implant including a central element 15, a top element 11 and a bottom element 12. The side wall 13 of the central element 11 is made from a plurality of layers 14 of silicone elastomer. The top element 11 includes a bottom layer 17 of silicone elastomer. Disposed above the bottom layer 17 is a central layer 18 of silicone elastomer and an upper layer 19 of silicone elastomer. Above the upper layer 19 is one or more layers 20 of a suitable fabric having an open porous weave to invite tissue ingrowth. A covering or coating 21 is folded across the top layer 20, preferably in pleats 22. The lower element 12 is preferably exactly the same as the upper element 11, except that its layers 17', 18', 19', 20' and 21' are in reverse order. In completing the implant 10, after the elements 11,

15 and 12 have been assembled in that order, the article 10 is stitched together through the fabric 21 by a filament 29 to join all parts firmly together. Then the assembly is subjected to vulcanizing heat which acts to weld various surfaces together.

Stubstad discloses an intervertebral implant wherein the sheathing is located on the outer periphery of the central element and in-between the top and bottom elements. Stubstad further discloses an intervertebral implant wherein the top and bottom elements are stitched together by a thread or filament. It is respectfully submitted that there is absolutely no disclosure, teaching or suggestion of a fibre system guided over the external surfaces of both cover plates and a fibre system that is at least partially embedded within an elastic sheathing body. Even if, as the Examiner proposes, one was to interpret the thread or filament 29 as the fibre system, the thread or filament is not embedded within the elastic sheathing body. That is, the thread or filament is not embedded within the so-called sheathing body (e.g. the plurality of layers). Rather, the thread or filament is stitched through the fabric that is located on the external surfaces of the top and bottom elements.

In addition, independent claim 1 was rejected as being unpatentable over Dickman in view of Stubstad.

Dickman discloses a disk prosthesis 40 including a matrix 41 of bioincorporable continuous fabric. In its central region, the substrate is impregnated with a liquid or semi-liquid polymer that intermixes with the substrate fabric to form a nuclear core (nucleus) 42. Dickman further discloses that the matrix fiber may include a pair of bumps or projections 101 on each of its end surfaces. The

projections being sized and configured to align with and enter respective mating through-holes 102 formed in a pair of plates 103, 104 at the top and bottom of the disk prosthesis.

It is respectfully submitted that Dickman also fails to disclose, teach or suggest a fibre system at least partially joined to the cover plates and guided over the external surfaces of both cover plates so that the fibre system at least partially surrounds the central part as well as both cover plates and a sheathing comprising an elastic sheathing body, the sheathing body at least partially surrounding the central part and wherein the fibre system is at least partially embedded within the elastic sheathing body. Rather, Dickman discloses a liquid or semi-liquid polymer that is surrounded by a matrix fiber. There is absolutely no disclosure, teaching or suggestion of a fibre system at least partially embedded within an elastic sheathing body.

For at least the above-identified reasons, it is respectfully submitted that neither Stubstad or Dickman, either alone or in combination, disclose, teach or suggest all of the limitations of independent claim 1. Thus, it is respectfully submitted that independent claim 1 is allowable over the cited prior art. Withdrawal of these rejections and allowance of independent claim 1 is respectfully requested.

Furthermore, as claims 2, 4-22 and 24-33 all depend from independent claim 1, it is submitted that these claims are equally allowable. Withdrawal of these rejections and allowance of claims 2, 4-22 and 24-33 is also respectfully requested.

#### **NEWLY ADDED INDEPENDENT CLAIM 34**

Newly added independent claim 34 requires, *inter alia*, an intervertebral implant comprising a top plate having an external surface, a bottom plate having an external surface and a central part located

between the internal surfaces of the top and bottom plates; an elastic sheathing body and a fibre system, wherein at least a portion of the fibre system is embedded in the elastic sheathing body and at least a portion of the fibre system is connected to the external surfaces of the top and bottom plates so that the fibre system at least partially surrounds the external surfaces of the top and bottom plates.

For at least the reasons identified above with respect to independent claim 1, it is respectfully submitted that neither Stubstad or Dickman, either alone or in combination, disclose, teach or suggest a fibre system at least partially embedded within an elastic sheathing body. Thus, it is respectfully submitted that neither Stubstad or Dickman, either alone or in combination, disclose, teach or suggest all of the limitations of independent claim 34. Thus, it is respectfully submitted that independent claim 34 is allowable over the cited prior art. Allowance of independent claim 34 is respectfully requested.

#### **NEWLY ADDED INDEPENDENT CLAIM 35**

Newly added independent claim 35 requires, *inter alia*, an intervertebral implant comprising a top plate having an external surface, a bottom plate having an external surface, and a central part located between the internal surfaces of the top and bottom plates, an elastic sheathing body and a fibre system wherein at least a portion of the fibre system is embedded in the elastic sheathing body and at least a portion of the fibre system is connected to the external surfaces of the top and bottom plates so that the fibre system at least partially surrounds the external surfaces of the top and bottom plates and wherein the fibre system includes a plurality of interwoven fibres and the external surfaces of the top and bottom plates includes a plurality of grooves formed therein for receiving the fibre system.

For at least the reasons identified above with respect to independent claim 1, it is respectfully submitted that neither Stubstad or Dickman, either alone or in combination, disclose, teach or suggest a fibre system at least partially embedded within an elastic sheathing body. Moreover, it is respectfully submitted that neither Stubstad or Dickman, either alone or in combination, disclose, teach or suggest a plurality of grooves formed in the external surfaces of the top and bottom plates for receiving the fibre system. Thus, it is respectfully submitted that neither Stubstad or Dickman, either alone or in combination, disclose, teach or suggest all of the limitations of independent claim 35. Thus, it is respectfully submitted that independent claim 35 is allowable over the cited prior art. Allowance of independent claim 35 is respectfully requested.

### **CONCLUSION**

No fee is believed due for this submission. If, however, the Commissioner determines otherwise, the Commissioner is authorized to charge any fees which may now or hereafter be due in this application to Deposit Account No. 19-4709.

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In the event that there are any questions, or should additional information be required, please  
contact Applicants' attorney at the number listed below.

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Respectfully submitted,

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